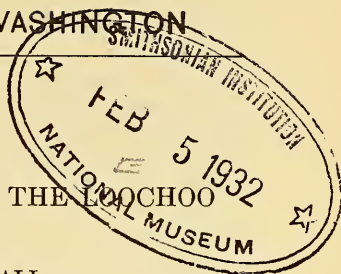


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON



NEW SHELLS FROM JAPAN AND THE LOOCHOO ISLANDS.

BY WILLIAM HEALEY DALL.

Among the shells collected by Messrs. Langford and Tha anum during the summer of 1925 in the Loochoo (Riu Kiu) Islands and Japan were several which appear to be new, indicating the extraordinary richness of the mollusk fauna of that region. Descriptions follow.

*Dentalium luchuanum*, n. sp.

Shell thin, translucent white, polished except for a short distance (about one-fifth the total length) near the posterior end, which is finely closely longitudinally striated; concentric sculpture only of sparse irregular faint incremental lines; both orifices circular, the posterior without sulci or slits; the shell is gently curved; length 39, diameter at orifice 2, perpendicular to the arch of the curve 2.5 mm. U. S. Nat. Mus. Cat. No. 333692.

Dredged in 15 fathoms at Nago, Okinawa, Loochoo Islands, by Langford and Tha anum. Tha anum collection No. 9596.

*Mitra satsumae*, n. sp.

Shell short, biconic, with about a dozen subangular ribs with wider inter-spaces; whorls about nine, rapidly enlarging; suture closely appressed, inconspicuous; ground color black, with a whitish band at the posterior margin of the whorl, which, as it crosses the ribs, has a tinge of brown; there is a narrower whitish line just in front of the periphery which when it crosses the ribs gives a nodular effect; there are three or four rude cords around the region of the canal; aperture narrow, with a white subsutural ridge and four white plaits on the pillar; outer lip sharp, with a whitish margin and black within; height, 19; aperture, 10; diameter, 9 mm. U. S. Nat. Mus. Cat. No. 333693.

Collected at Waki, Satsuma, Japan. Tha anum collection No. 9436.

The periostracum is finely axially striated.

**Mitra nakama**, n. sp.

Shell minute, black, with a paler band at the posterior edge of the last whorl and a half; whorls about six, the nucleus smooth and somewhat irregularly swollen; suture closely appressed; axial sculpture of about 20 narrow low threadlike ribs with subequal interspaces; spiral sculpture of faint obsolescent striae between the ribs and two or three threads on the canal; aperture narrow, outer lip sharp; throat blackish, pillar with three dark plaits; canal hardly differentiated; height, 7; aperture, 3; diameter, 3 mm. U. S. Nat. Mus. Cat. No. 333694.

Collected at Nakama Island, Okinawa, Loochoo Ids. Thaanum collection 9576.

This is doubtless one of the smallest species of the group. The surface is smooth except for the sculpture, but hardly polished.

Genus **PLANAXIS** Lamarck.

Type, *Planaxis sulcata* Lamarck.

Subgenus **Angiola**, nov.

Shell differing from typical *Planaxis* by minute size, thin shell, hispid periostracum, and in details of the radula. Type:

**Angiola periscelida**, n. sp.

Shell minute, acute, with about seven whorls, microscopically hispid; whorls translucent, glassy, with a strong spiral purple brown line (sometimes duplex) at the periphery, which on the spire appears just behind the suture; another less conspicuous similar line occurs just behind the canal; suture distinct, not deep, the whorls moderately convex; sculpture of fine equal spiral striae over the whole surface except on the base near the canal where there are a few strong threads; there is no axial sculpture; aperture ovate, the outer lip simple, slightly thickened in the adult; a well marked layer of enamel on the body and concavely arcuate pillar; canal short, deeply sulcate; operculum horny, oval, with a very small terminal incurvation; height of shell, 5.5; of last whorl, 3; of aperture, 2.3; diameter, 2.5 mm. U. S. National Museum Cat. No. 333700. Collected at Waki, Satsuma, Japan: Thaanum collection 9444.

This pretty little shell has the form, but not the size or the porcellanous structure of *Planaxis zonatus*, nor the heavily callous peristome of the latter, with which it has been compared. The operculum is like that of *Planaxis* or *Litiopa*. In measurements *Planaxis zonatus* is 10 mm. high and 6 mm. in diameter, or about four times the size of the present species, with the same number of whorls.

I may note that Rang states that he was not able to find any operculum in *Litiopa*, which statement is copied by Philippi in his Handbuch. On the other hand H. and A. Adams describe it as having "many whorls." The operculum is really like that of *Planaxis* and is correctly figured by Troschel.

The radula approaches nearest to that of *Planaxis nucleus* Sowerby, as figured by Troschel. It is very minute and difficult to untangle. The

cusps of the outer lateral are of a different shape from those of *T. nucleus*, and the inner lateral, as far as could be determined, differs in minor particulars from that of the latter.

*Liotia langfordi*, n. sp.

Shell white, solid, with four and a half whorls, the nucleus very minute and smooth; upper whorls somewhat flattened and subcarinate behind the periphery; suture coronate by the ends of (on the last whorl about a dozen) prominent rounded ribs with wider interspaces, which on the spire reach to the carina, but on the last whorl only become obsolete on the base; the suture is deeply pitted between the ribs; other axial sculpture is of fine sharp striae which cover closely the whole shell; spiral sculpture of four to six threads on the spire between the carina and the suture, a strong cord at the periphery with pits between it and the carina, and on the base numerous feeble threads; umbilicus narrow, deep, crenulated at the rim with pits behind and between the crenulations; aperture circular, with a heavy expanded margin; operculum horny, brown, multispiral, with minute calcareous beads on the surface; height, 4; max. diameter, 8; diameter of aperture, 4 mm. U. S. Nat. Mus. Cat. No. 333695.

Collected at Waki, Satsuma, Japan, in 20 fathoms. Thaanum collection 9445.

This is nearest to *L. hermanni* Dunker, but the minor sculpture is different.

*Emarginula imaizumi*, n. sp.

Shell small, whitish, with irregular gray radiations; the apex elevated, incurved,—a quarter of the whole length in front of the posterior margin; sculpture of numerous equal close-set ribs, without intercalaries, crossed by smaller threads which in passing over the ribs swell to prominent semicircular nodules; the interspaces are so narrow that reticulation is hardly visible; the ribs end in sharp denticulations at the margin; the general profile is oval, slightly wider abreast the apex; the slit is narrow,  $2\frac{1}{3}$  mm. long in the type; the interior is bluish white, with a ridge over the closed part of the slit; length, 13; height, 4; greatest width, 8.6 mm. U. S. Nat. Mus. Cat. No. 333696.

Collected at Imäizumi, Kagoshima Bay, Japan, on oysters, from a depth of 50 fathoms. Thaanum collection 9403.

*Emarginula (imaizumi var.?) imella*.

Shell white, the ribs more slender, hardly nodulous except behind the apex, less close set, so that a punctate reticulation is conspicuous; the slit relatively shorter; the margin moderately crenulate; otherwise resembling the preceding form. Length, 12; height, 5; width, 8.3 mm. U. S. Nat. Mus. Cat. No. 333697.

Collected with the last. Thaanum collection 9402.

It is quite probable that this is merely a variety of *E. imaizumi*, but the aspect of the sculpture is so different that it seems desirable to call attention to it.

***Ischnochiton thaanumi*, n. sp.**

Chiton of moderate size, dorsum not prominently elevated, anterior valve with 12, posterior with 8 rather obscure slits, faintly striated; intermediate valves with one slit; gills nearly ambient; girdle with crowded ovate smooth somewhat imbricated scales, alternately suffused in gray and whitish patches; general coloration light gray with small round white maculations; anterior valve semicircular, with numerous radiating minutely beaded threads; posterior valve with a low subcentral mucro, behind which the surface is minutely reticulate, in front sculptured like the anterior valve; intermediate valves slightly mucronate, not keeled, the jugal area not defined; lateral tracts with a posterior rib articulated with light and dark coloration in front of which are four or five smaller threads; pleural areas with minute radial threads inconspicuously decussated; the sinus is shallow and the sutural laminae narrow; length of the (dry) type, 16; width, 12; height about 3.5 mm. U. S. Nat. Mus. Cat. No. 333698.

Collected at Nago, Okinawa Island, Loochoo Islands. - *Thaanum* collection 9594.

The coloration under a lens is extremely elegant.

***Ischnochiton melinus*, n. sp.**

Chiton small, pale greenish-gray with sparse black dots irregularly distributed, the girdle very minutely closely scaled, with alternate grayish and blackish patches, having a velvety aspect; back roundly arched, the valves not mucronate; the whole surface is microscopically decussate, the areas hardly defined; anterior valve small, feebly radially striate; posterior valve with subcentral inconspicuous mucro; anterior valve with 12, posterior with 10, intermediate with 1 slit; the lateral tracts are nearly smooth, without radial sculpture, merging into the similar pleurals; the sinus is inconspicuous; length of (dry) shell approximately 10, breadth 5, height 3 mm. U. S. Nat. Mus. Cat. No. 333699.

Collected in Tokyo Bay, Japan, in 8 fathoms on dead shells; *Thaanum* collection 9592.

The gills appear to be about two-thirds ambient.